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REMARKS

Applicants respectfully request entry of the amendment and reconsideration of the rejection of the claims.

Claims 1, 11, 12, 30-45, and 81 are currently pending. Claims 11 and 30-45 are currently under examination and claims 1, 12, and 81 are withdrawn. By this amendment, claims 1, 12, and 81 are cancelled without prejudice and disclaimer. Applicants reserve the right to pursue the subject matter of these claims in one or more continuation applications.

Claim 11 has been amended to further clarify the claimed invention. Claim 94 is newly presented. After entry of the Amendment, claims 11, 30-45, and 94 will be pending. Applicants submit the amendment is supported throughout the specification, including at page 39, lines 16-21 and at page 49, lines 18-21, and does not raise any issues of new matter.

Utility

The Examiner rejected claim 11 and 30-45 under 35 U.S.C § 101 as lacking utility. The Examiner alleges the claimed invention lacks a credible asserted utility or a well-established utility. Applicants respectfully traverse this rejection.

The Examiner alleges further research would be required to identify or reasonably confirm a "real world" context of use. Applicants submit in order to establish utility they are not required to provide evidence sufficient to establish that an asserted utility is true beyond a reasonable doubt. *In re Irons*, 340 F.2d 974, 978 (CCPA 1965). Nor do Applicants have to provide evidence that establishes the asserted utility as a matter of statistical certainty. *Nelson v. Bowler*, 626 F.2d 853, 856-867 (CCPA 1980). Rather, Applicants only have the burden of presenting evidence that leads a person of ordinary skill in the art to conclude that the asserted utility is more likely than not true. MPEP § 2107.02 (emphasis in original).

Applicants submit that the invention as presently claimed has both specific and substantial utility according to the Utility Guidelines. The Utility Guidelines state that specific utility is that which is specific to the subject matter claimed. Thus, specific utility requires

¹ Applicants note the Office Action Summary incorrectly states that claims 1-93 are pending and claims 1-10, 12-29 and 46-93 are withdrawn. By contrast, claims 2-10, 13-29, 46-80, and 82-93 were cancelled in the transmittal document for the present application.

something more than a statement of diagnosing an unspecified disease, such as a disclosure of what condition can be diagnosed. The specification discloses that antibodies that specifically bind SEQ ID NO:26 may be used for the diagnosis of disorders associated with expression of SEQ ID NO:26. The specification describes cancer as a disorder associated with expression of SEQ ID NO:26. Specification at page 50, lines 29-33. Applicants therefore submit the claimed antibodies in the least have specific utility for the diagnosis of cancer.

For example, the specification discloses that antibodies can be used for diagnosis of disorders characterized by expression of MEMAP such as, for example, SEQ ID NO:26 (page 49, lines 18-20). Diseases associated with expression of MEMAP include cancers including ovary, breast, gastrointestinal tract, kidney, lung, skin, testis, prostate, bladder, adenocarcinoma, and colon cancer (page 50, lines 25-33 and page 52, lines 1). Examples of disorders associated with increased expression of MEMAP include cancer, including ovary, breast, gastrointestinal tract, kidney, lung, skin, testis, prostate, bladder, and adenocarcinoma (page 37, lines 10-13 and page 38, line 35 to page 39, line 2).

SEQ ID NO:26 has been shown to be over expressed in tumors as compared to normal tissue. In WO03/000113, for example, SEQ ID NO:26 corresponds to amino acid residues 29-254 of TAT183. In experiments performed using GeneExpress expression database analysis, TAT183 was significantly over expressed in breast, colon, rectum, endometrial, kidney, lung, ovarian, skin, testis and bladder cancers as compared to normal tissues (page 127, lines 39-48). In experiments performed using microarray analysis, TAT183 was found to be significantly over expressed in ovarian, rectum, colon, lung, breast, and prostate tumors as compared to normal tissues (page 131, lines 9-14). In real-time quantitative PCR experiments, TAT183 was significantly over expressed in lung tumor as compared to normal lung tissue (page 133, line 25). In experiments performed using GEPSIS, an RNA expression database in which expression of a gene is determined based on proportional correlation with the number of ESTs in databases, TAT183 was significantly over expressed in breast, endometrial, lung, and skin tumors as compared to normal tissues (page 145, lines 40-43). This information confirms that antibodies that specifically bind SEQ ID NO:26 are useful for diagnosing cancers characterized by over expression of MEMAP.

Further, Applicants respectfully disagree with the Examiner's statement that there is "no clear guidance in the specification regarding the biological activity of SEQ ID NO:26". The Examiner alleges that Brenner teaches that sequence identity alone is insufficient to establish functional relationships between proteins. In view of the teachings of Brenner, the Examiner maintains the amino acid sequence homology between SEQ ID NO:26 and mouse transporter protein (MTP) provides insufficient information to enable the artisan to reasonably predict that SEQ ID NO:26 is functionally related to MTP."

As a preliminary matter, Applicants disagree with the Examiner's assertion that Brenner teaches that "sequence homology alone is insufficient to establish functional relationships between proteins, rather it must be used in concert with structural information to accurately establish relationships between proteins." Benner assesses the performance of different sequence comparison methods for identifying homologs as it would be employed by one skilled in the art attempting to identify homologs of a specific protein. To assess this performance, Brenner used the SCOP database as a sample population of proteins. The assessment of the performance used proteins that were structurally and functionally characterized.

Brenner teaches that pairwise sequence comparison methods are capable of detecting almost all relationships between proteins whose sequence identities are greater than 30% (Brenner, Abstract at page 6073 and figure 3 at page 6075). Brenner et al. also found that pairwise sequence comparison methods utilizing statistical scores, such as E-values, recognized greater than 90% of the homologous pairs with 30-40% identity (Brenner et al. at page 6077). Brenner et al. conclude that E-values give fairly accurate estimates of the significance of pairwise sequence matches and the homologous proteins found by sequence comparison can be distinguished with high reliability from the huge number of unrelated pairs. (Brenner et al. at pages 6077-6078).

Applicants' methods for identifying protein sequence homology were similar to the pairwise sequence comparison methods described in Brenner. See, for example, specification at pages 15-17. As discussed above, Brenner et al. teach that pairwise sequence comparison methods are capable of detecting almost all relationships between proteins whose sequence identities are greater than 30% (Brenner et al., Abstract at page 6073 and figure 3 at page 6075). SEQ ID NO:26 has 43% amino acid identity with MTP, also known as lysosome associated

transmembrane protein 4 alpha, over 229 residues (copy of alignment enclosed). Therefore, one skilled in the art would recognize that a functional assignment of SEQ ID NO:26 based on the significant homology to MTP is more likely than not true.

Applicants have demonstrated the claimed invention sufficiently complies with the utility requirement of 35 U.S.C. § 101. The claimed antibodies have specific and substantial utility in diagnostic methods for detection of cancer. Withdrawal of the rejection is respectfully requested.

Enablement

Claims 11 and 30-45 were rejected under 35 U.S.C. § 112, first paragraph, as lacking enablement. The Examiner alleges one skilled in the art would not know how to use the claimed invention because the claimed invention is not supported by a credible utility or a well-established utility. Applicants respectfully traverse this rejection.

Antibodies to a polypeptide associated with cancer have well-established utility in diagnostic assays for detecting cancer. As discussed above, Applicants' antibodies to SEQ ID NO:26, in the least, have credible utility in a diagnostic assay for detecting cancer. Specification at page 49, lines 18-35. Applicants assert the specification teaches one skilled in the art how to use the claimed invention because the claimed invention is supported by a well-established utility. Withdrawal of this aspect of the rejection under § 112, first paragraph, is respectfully requested.

The Examiner alleges the specification does not provide sufficient guidance to make and use the scope of claimed antibodies. Specifically, the Office Action asserts that antibodies that specifically bind to a polypeptide comprising a naturally occurring amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO:26 are allegedly not enabled. Applicants do not agree with or acquiesce to the rejection. However, in order to expedite prosecution, Applicants have directed the claims to an antibody that specifically binds a polypeptide comprising an amino acid sequence of SEQ ID NO:26, an immunogenic fragment of a polypeptide having the amino acid sequence of SEQ ID NO:26, or a biologically active fragment of a polypeptide having an amino acid sequence of SEQ ID NO:26. This amendment renders the basis of this rejection under § 112, first paragraph, moot.

Withdrawal of the enablement rejection is respectfully requested.

Written Description

Claims 11 and 3-45 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Office Action states that adequate written description is provided for "an antibody which specifically binds the polypeptide of SEQ ID NO:26 or immunogenic fragments thereof." The Office Action further states that Applicants allegedly lacked possession of the genus of antibodies specifically binding polypeptides comprising a naturally occurring amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO:26. Applicants respectfully traverse this rejection.

Without acquiescing to the rejection and solely to expedite prosecution, Applicants have directed the claims to an antibody that specifically binds a polypeptide comprising an amino acid sequence of SEQ ID NO:26, an immunogenic fragment of a polypeptide having the amino acid sequence of SEQ ID NO:26, or a biologically active fragment of a polypeptide having an amino acid sequence of SEQ ID NO:26. This amendment renders the basis of the rejection under § 112, first paragraph, moot. Withdrawal of the written description rejection is respectfully requested.

Anticipation

Claims 11 and 30-45 were rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,448,230 to Ruben et al. (hereinafter the '230 patent). The Examiner alleges the antibodies disclosed in the '230 patent anticipate Applicants' claims to antibodies that specifically bind SEQ ID NO:26. The Examiner also contends that antibodies that bind to any of the many polypeptides described in the '230 patent are generally described. The Examiner asserts that given the high degree of identity between the polypeptides of the '230 patent and SEQ ID NO:26 one of skill in the art would reasonably expect that antibodies to polypeptides in the '230 patent would bind to SEQ ID NO:26. Applicants respectfully traverse this rejection.

To anticipate a claim, each and every element of the claim must be described, either expressly or inherently, in a single prior art reference. Verdegaal Bros. v. Union Oil of California, 814 F.2d 628, 631 (Fed. Cir. 1987). Applicants submit that the Ruben et al reference does not anticipate the claims because it does not describe all of the elements of the claims.

Antibodies to the polypeptide of the '230 patent would not specifically bind to a polypeptide comprising the amino acid sequence of SEQ ID NO:26 or immunogenic fragments thereof as required by claim 11 of the present application, because "specific binding", as used in the present application and well-understood in the art, means that the antibody binds a particular polypeptide and does not substantially bind to any other polypeptide.

The term "specifically bind" is defined in the present application at page 22, lines 8-14. The definition states that "specific binding" and "specifically binding" refer to that interaction between a protein or peptide and an agonist, an antibody, an antagonist, a small molecule, or any natural or synthetic binding composition. The definition further states that the interaction is dependent upon the presence of a particular structure of the protein, e.g., the antigenic determinant or epitope, recognized by the binding molecule. Applicants note that claim 11 requires specific binding to a polypeptide comprising the amino acid sequence of SEQ ID NO:26 or immunogenic fragment thereof.

Further clarity as to the meaning of the phrase "specific binding" is provided by definitions of the term "specific". Page 1132 of the Webster's Ninth New Collegiate Dictionary defines the word "specific" as "restricted to a particular individual, situation relation or effect" or "of, relating to, or constituting a species" (enclosed herewith as Exhibit A). As such, when referring to an antibody's ability to "specifically bind" to SEQ ID NO:26, one clearly can understand that the antibody's ability to bind is "restricted" to SEQ ID NO:26 or immunogenic fragments thereof(i.e., the meaning of the term "specific"). Therefore, it is well accepted in the art that the term "specifically binds" in reference to an antibody means that the antibody is capable of binding to a "restricted" thing or a group of things (e.g., a polypeptide comprising the amino acid sequence of SEQ ID NO:26 or immunogenic fragments thereof in the present claims) but the antibody does not bind to things outside of that specifically defined and restricted group of thing(s).

Page 1730 of The American Heritage Dictionary of the English Language, Third Edition (enclosed herewith as Exhibit B) provides the meaning of the word "specific" in relation to antibody or antigen binding as "[h]aving an affinity limited to a particular antibody or antigen". Again, the dictionary's definition of the term "specific" is consistent with the skilled artisan's well-accepted meaning of the term "specifically binds" to mean that the antibody is capable of

binding to a "restricted" thing or a group of things (e.g., a polypeptide comprising the amino acid sequence of SEQ ID NO:26 or immunogenic fragments thereof in the presently pending claims) but the antibody does not bind to things outside of that specifically defined and restricted group of thing(s).

The pending claims encompass antibodies that bind to a polypeptide comprising the amino acid sequence of SEQ ID NO:26 or immunogenic fragments thereof and do not substantially bind to any other polypeptide (i.e. "specific binding"). Thus, the claims are directed towards antibodies that specifically bind one class of polypeptides: polypeptides comprising the amino acid sequence of SEQ ID NO:26 or immunogenic fragments thereof. In contrast, the Ruben et al reference discloses polypeptides that differ in size and amino acid sequence from that of a polypeptide comprising SEQ ID NO:26. Thus, the Ruben et al. reference does not anticipate the claims, in the least, because it does not describe antibodies that specifically bind to a polypeptide comprising SEQ ID NO:26 or immunogenic fragments thereof.

Based on the foregoing, Applicants respectfully request withdrawal of the 35 U.S.C. 102 (e) rejection of the claims.

Summary

In view of the above amendments and remarks, Applicants respectfully request a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

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23552

PATENT TRADEMARK OFFICE

12

Application No. 09/965,529 Amendment dated June 14, 2004 Response to Office Action of February 12, 2004

APPENDIX

one distinctness of equivocal reference

rogram) that is not a special service or

private property to

special delivery n (1886): expedited messenger delivery of mail matter for an extra fee special district n (1950): a political subdivision of a state established to special district n (1950) as water supply or sanitation) within a

provide a single public service (as water supply or sanitation) within a

provide a single public service (as water supply of salitation) within a specific geographical area special drawing rights n (1967): a means of exchange used by governments to settle their international indebtedness special effects n pl (1944): visual or sound effects introduced into a motion picture or a taped television production during laboratory

processing

Special Forces n pl (1962): a branch of the army composed of men specially trained in guerrilla warfare specially trained in guerrilla warfare special handling n (1928): the handling of parcel-post or fourth-class special handling n (1928) and the handling of parcel-post or fourth-class special handling n (1928).

apecial interest n (1910): a person or group seeking to influence legisla-tive or government policy to further often narrowly defined interests;

ive or government policy to further often narrowly defined interests; ive or government policy to further often narrowly defined interests; esp t LOBBY

special-ism \spesh-o-,liz-om\ n (1856) 1: specialization in an occupation or branch of learning 2: a field of specialization: SPECIALTY is special-ist \spesh-o-)lost\ n (1856) 1: one who devotes himself to a special-ist \spesh-o-plost\ n (1856) 1: one who devotes himself to a special-ist \spesh-o-plost\ n (1856) 1: any of four enlisted ranks in the army corresponding to the grades of corporal through sergeant first class — special-ist or special-ist \spesh-o-plost\ n, pl -tles (15c) 1: a special mark or special-ity \spesh-o-plost\ n, pl -tles (15c) 1: a special mark or quality 2: a special object or class of objects 3 a: a special aptitude or skill b: a particular occupation or branch of learning special-iza-tion \spesh-o-plost\ n (1843) 1: n making or becoming specialized 2 a: structural adaptation of a body part to a particular function or of an organism for life in a particular environment b: a body part or an organism adapted by specialization ment b: a body part or an organism adapted by specialization ular mention of: PARTICULARIZE 2: to apply or direct to a specific end or use (specialized his study) ~ vi 1: to concentrate one's efforts in a special activity or field 2: to undergo specialization: esp: to change adaptively (the sloth became highly specialized in the course of evolution)

evolution)

specialized adj (1853) 1: designed or fitted for one particular purpose or occupation (~ personnel) 2: characterized by or exhibiting bloological specialization: esp: highly differentiated esp. in a particular direction or for a particular end special jury n (1730): a jury chosen by the court on request from a list of better educated or presumably more intelligent prospective jurors for a case involving complicated issues of fact or serious felonics—called also blue-ribbon jury special pleading n (1684) 1: the allegation of special or new matter to offset the effect of matter pleaded by the opposite side and admitted, as distinguished from a direct denial of the matter pleaded 2: misleading argument that presents one point or phase as if it covered the entire question at issue

ing argument that presents one point or phase as it it covered the entire question at issue special theory of relativity (1924): RELATIVITY 3a speciality \specialite, in, pl-ties [ME specialite, fr. MF especialite. In. L. specialite, specialite,

coin — in specie; in the same or like form or kind (ready to return insult in specie); also: in coin ** specie n [back-formation fr. species (taken as a pl.)] substand (1711)

: SPECIES
: SPECIES
: Species \Species \(\) shez, \(\), \(\) sez\ \(n. \) pl species \(\) [1. appearance, kind, species \(-\) more at sry\\ (1551) \) 1 a: a class of individuals having common attributes and designated by a common name; specif: a logical division of a genus or more comprehensive class b: kIND SORT c: the human race: human beings \(--\) often used with the (survival of the \(--\) in the nuclear age\) d (1): a category of biological classification ranking immediately below the genus or subgenus, comprising related organisms or populations potentially capable of interbreeding, and being designated by a binomial that consists of the name of a genus followed by a Latin or lutinized uncapitalized noun or adjective agreeing grammatically with the genus name (2): an individual or kind belonging to a biological species e: a particular kind of atomic nucleus, atom, molecule, or ion 2: the consecrated eucharists of elements of the Roman Catholic or Eastern Orthodox Eucharist 3 a: a mental image: also: a sensible object b: an object of thought correlative with a natural object.

also: a sensible object b: an object of thought correlative with a natural object species ad (1899): belonging to a biological species as distinguished from a horticultural variety (a ~ rose) from a horticultural variety (a ~ rose): species from y species the livery of the livery o

which a patent is sought
specific epithet n (1947): the Latin or latinized noun or adjective that
specific epithet n (1947): the Latin or latinized noun or adjective that
specific gravity n (1666): the ratio of the density of a substance to the
density of some substance (as pure water or hydrogen) taken as a standard when both densities are obtained by weighing in air
specific heat n (1832). I: the ratio of the quantity of heat required to
raise the temperature of a body one degree to that required to raise the
temperature of an equal mass of water one degree. 2: the heat in calories required to raise the temperature of one gram of a substance one
degree centigrade.

ries required to raise the temperature of one gram of a substance one degree centigrade specific impulse n (1947): the thrust produced per unit rate of consumption of the propellant that is usu, expressed in pounds of thrust per pound of propellant used per second and that is a measure of the efficiency of a rocket engine specificiety \spes-o-fis-ot-o\ n (1876): the quality or condition of being specific: as a: the condition of being peculiar to a particular individual or group of organisms (host \sigma of a parasite) b: the condition of participating in or cutalyzing only one or a few chemical reactions (the \sigma of an enzyme) specific performance n (1873) 1: the performance of a legal contract strictly or substantially according to its terms 2: an equitable remedy enjoining specific performance

ly adv — specious-ness n

speck \'speck\ n [ME specke. fr. OE specca] (bef. 12c) 1: a small disspeck \'speck\ n [ME specke. fr. OE specca] 2: a very small amount
coloration or spot esp. from stain or decay 2: a very small amount
: BIT 3: something marked or marred with specks — specked \'speki\

*speck vi (1580): to produce specks on or in speck-le \'speck-ol\ n [ME; akin to OE specca] (15c): a little speck (as of color)

of color)

speckle vi speck-led; speck-ling \-(s-)lin\ (ca. 1570) 1: to mark with speckle vi speckled; speckled in or on like speckles

speckled perch n (1888): HLACK CRAPPIE speckled trout n (1805) 1: BROOK TROUT 2: SPOTTED SEA TROUT speckled trout n (1805) 1: BROOK TROUT 2: SPECIFICATIONS

speckled trout n (1805) 1: SPECIFICATIONS

spectacle \(\frac{1}{2}\) speck-li-kal also \(\frac{1}{2}\) in \(\frac{1}{2}\) n \(\frac{1}{2}\) in \(\frac{1}{2}\) n \(\frac{1}{2}\) spectacle \(\frac{1}{2}\) spectacle \(\frac{1}{2}\) spectacle \(\frac{1}{2}\) not spectacle \(\frac{1}{2}\) spectacle \(\frac{1}{2}\) not spectacle \(\frac{1}{2}\) in \(\frac{1}{2}\) in \(\frac{1}{2}\) something exhibited to view as unusual, notable, or entertaining; exp: an eye-cutching or dramatic public display b \(\frac{1}{2}\) an object of curiosity or contempt \((made a \simp of \) lesses

\(\frac{1}{2}\) called \(\frac{1}{2}\) something \((as \) natural markings on an animal) suggesting a pair of glasses

\(\frac{1}{2}\) spectacled \(\frac{1}{2}\) in \(\frac{1}{2}\) having markings suggesting a pair of spectacles \((a \simp \) alligations in the spectacles \((a \simp \) spectacles \(a \simp \) spectacles \((a \simp \) spectacles \((a

ler: Gifostly 2: of, relating to, or made by a spectrum.

\spec-tra-lc\ adv

\spec-tra-lc\ adv

spectral line n (1902): one of a series of linear images of the narrow, slif

spectral line n (1902): one of a series of linear images of the narrow, slif

spectro-graph or similar instrument corresponding to a component

of the spectrum of the radiation emitted by a particular source

spectro-comb form [NL spectrum]: spectrum (spectro-cope)

spectro-flue-orpm-oter \spectrum(): pectrum (spectro-cope)

o-rim-oter \sim-\n [spectr- + fluoramater] (1962): a device for mea
o-rim-oter \sim-\n [spectr- + fluoramater] (1962): a device for mea
suring and recording fluorescence spectra — spec-tro-flu-o-ro-met-fluoramater)

diag radi: radi: reconstruction of the construction of the cons

OTT Jsp spec par sper \-lr spec pro rela c)y in۷ tto: inte

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SOT ŧO att

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SP. c SŞ

specialization

EXHIBIT B

ion (spesh/a-lt-za/shan) n. I. The act of sperocess of becoming specialized. 2. Biology. a. an argan or organism. to a specific function or A character, a feature, or an organism resulting

pésh/a-liz/) p. -lzod, -lz-lng, -lz-as. - intr pecial activity, occupation, or field of study. 2.
op so as to become adapted to a specific function
undergo specialization. 3. To concentrate on a

particular activity or product: The shop specializes in mountain climbing gear. — tr. 1. To make specific mention of; particular-climbing gear. — tr. 2. To make specific mention to: specialized ize. 2. To give a particular character or function to: specialized have field of research. 3. Biology. To adopt to a particular function her field of research. 3. Biology. To adapt to a particular function or environment; cause to undergo specialization. 4. To specify the payer in endorsing (a check).

special jury n. Law. See blue-ribbon jury.

Special Olympics pl.m. A program of competitive sports events fashioned after the Olympic games and intended for physical statements and intended for physical statements. ically or mentally challenged othletes.

special pleading n. 1. Law. Assertion of new or special matter to offset the opposing party's allegations, as an alternative to direct denial. 2. A presentation of an argument that emphasizes only a favorable or single aspect of the question at issue.

special relativity n. The physical theory of space and time developed by Albert Einstein, based on the postulates that all the developed by Albert Einstein, based on the postulates that all the laws of physics are equally valid in all frames of reference moving at a uniform velocity and that the speed of light from a uniformly moving source is always the same, regardless of how fast or slow the source or its observer is moving. The theory has as consequences the relativistic mass increase of rapidly moving objects, the Lorentz-Fitzgorald contraction, time dilutation, and the principle of mass-energy contraction. Also called energical theory of sol. ciple of muss-energy equivalence. Also called special theory of rel-

special session n. A session of a court or legislative body held in addition to the regular sessions.

special theory of relativity n. See special relativity.

spe-cial-ty (spesh/ol-te) n., pl. -flos. 1. A special pursuit, accupation, aptitude, or skill. See Synonyms at fortal. 2. A branch of medicine or surgery, such as cardiology or neurosurgery, in which a physician apecializes; the field or practice of a specialist. 3. A special feature or characteristic; a peculiarity. 4. The store or quality of being special or distinctive. S. An item or The state or quality of being special or distinctive. So, fail tent of a product of a distinctive kind or of particular superiority; French postry is the chef's specialty. 6. Law. A special contract or agreement, especially a deed kept under seat.

spe-ci-d-tion (spe-she-a/shon, -to-) n. The evolutionary tormation of new biological species, usually by the division of a singic species into two or more genetically distinct ones. [SPECI(ES) + -ATION.] —spo'd-attioned adj.

spe-cia (spa-she, -sc) n. Coined money; coin. — Idlam. In spe-cio. 1. In coin. 2. In a similar monner; in kind: repaid the offense in specie. 3. Law. In the same kind or shape; as specified. [From (in) specie, (in) the actual form, from Latin (in) specie, (in) kind, ablative of species. See species.]

spe-cies (spetchez, -set) n., pl. species. Abbr. sp. 1. Biology, g. A fundamental category of taxonomic classification, ranking below a genus or subgenus and consisting of related organisms capable of interbrooding. See table at taxonomy. b. An organism belonging to such a category, represented in binomial nomentleture by an uncapitalized Lutin adjective or noun following a contributed mountained and in America company. clature by an uncapitalized Latin adjective or noun following a capitalized genus name, as in Ananas comasus, the pineapple, and Equus caballus, the horse. 2. Logic. A class of individuals or objects grouped by virtue of their common attributes and assigned a common name; a division subordinate to a genus. 3.a. A kind, variety, or type; "No species of performing artist is as self-critical at a dancer" (Susan Sontagl. b. The human race; humankind. 4. Roman Catholic Church. a. The outward appearance or form of the Eucharistic elements that is rotained after their consecration. b. Either of the consecrated elements of the Eucharist. 5. Obb. Either of the consecrated elements of the Eucharist. 5. Obsoletc. a. An outward form or appearance. b. Specie. [Middle English, logical chassification, from Latin species, a seeing, kind, form. See spok- in Appendix.)

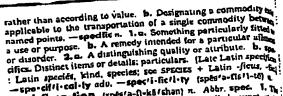
spe-cies ism (spe'she-ziz'am, -zé-) n. Human intolarance or discrimination on the basis of species, especially as manifested by cruelty to or exploitation of animals. —spe'cies ist' ady, & n.

spo-clas-spo-cif-ic (spe-shiz-spi-sti/tk, -sez-) adj. Limited to or found only in one species: a species-specific antibody; a apocies specific virus. —sporcias speciis fleri-ty (-spec'a-

specif. abbr. 1. Specific. 2. Specifically.
spec-i-fica-bla (specy-fira-bal) adj. Possible to specify:

specifiable complaints.

500-cif-lc (spi-cifrik) adj. Abbr. specif., sp. 1. Explicitly set 500-cif-lc (spi-cifrik) adj. Abbr. specif., sp. 1. Explicitly set forth; definite. See Synonyms at explicit. 2. Relating to, characterizing, or distinguishing a specific. 3. Special, distinction, and the specific realities and attributes. 4. a. Intended for, applying to, or acting on a particular thing; a specific remedy for warts. 5. Concerned particularly with the subject specified. Often used in combination: "age-specific potting patterns" (A. Diotton used in combination: "age-specific potting patterns" (A. Dianne Schmidley). 5. a. Designating a disease produced by a particular intercorganism or condition. 5. Having a romedial influence or offset on a particular antibody or antigen. 7. a. Designating a customs charge levied on merchandise by unit or weight



spec-i-fi-ca-tion (spec'o-fi-kB/shan) n. Abbr. spec. 1. 11.
act of specifying. 2.a. specifications. A detailed, exact sq.
ment of particulars, especially a statement prescribing material. dimensions, and quality of work for something to be built is stalled, or manufactured. b. A single tem or article that has be smalled. specified. J. An exact written description of an invention by a applicant for a patent.

specific epithet n. The uncapitalized Latin adjective or tag that follows a capitalized genus name in binomial nomenclates and serves to distinguish a species from others in the same general serves to distinguish a species from others in the same general serves are saccharum in Acer saccharum (sugar maple). Also called trace

specific gravity n. Abbr. sq. sp gr The rutio of the mass of an equal volume of distribed wage? at 4°C (39°F) or of a gas to an equal volume of air or hydrage, under presembed conditions of temperature and pressure.

specific heat n. Abbr. sp ht 1. The ratio of the amount of be required to raise the temperature of a unit mass of a substance one unit of temperature to the amount of heat required to mix & temperature of a similar mass of a reference material, usually ster, by the same amount. 2. The amount of heat, measured a calories, required to raise the temperature of one gram of a same than the calories of the calories

specific impulse n. A performance measure for rocket popularis that is equal to units of thrust per unit weight of popularis consumed per unit time. Also called specific thrust.

specific performance n. Law, The performance of a co tract as specified in its terms.

specific resistance n. Electricity. Electrical resistanty.

specific thrust n. See specific impulsa.

specific infrust n. see specific imposes.

specifity (specific) (n.u. -fied, -fy-ing, -flos, 1. To make explicitly or in detail: specified the amount needed. 2. To include in a specification. 3. To state as 'n condition: specified that they be included in the will. [Middle English specifien, from the French specifier, from Late Latin specificare, from specificus, specific See specifier. - specificiare n. citic. See SPECIFIC.] -specii-fi'er n.

Spec-1-men (spex/a-man) u. Abbr. sp. 1. An individual, u item, or a part representative of a class, genus, or whole. See \$17 onyms at example. 2. A sample, as of tissue, blood, or win used for analysis and diagnosis. 3. Informal An individual: person: a diagrecuble specimen. [Letin, example, from specimen.] to look at. See spake in Appendix.

specious (applicates) adj. 1. Having the ring of truth or plus sibility but actually fallacious: a specious orgument. 2. Desp

USAGE NOTE: A specious argument is not simply a take one one that has the ring of truth. Those aware of the specialized of the word may therefore sense a certain contradiction in health an argument described as obviously specious or specious on face of things; if the follociousness is apparent, the argument of probably not plausible-sounding to begin with.

speck (spek) n. 1. A small spot, mark, or discoloration. 2 tiny amount; a bit; not a speck of truth in her story. — speck if specked, speck-ling, specks. To mark with specks. [Miss. English specke, from Old English specca.

spack·le (spek/al) n. A speck or small spot, especially a name dot of color on skin, plumage, or foliage. [Middle English spate

speck-led (spek/old) adj. 1. Doited or covered with specke especially flecked with small spots of contrasting color. 2 or mixed character; motloy.

speckled trout n. See brook frout.

SPOCS also specks (speks) pl.n. Informal. Eyeglusses; spec

spec-ta-cle (spek/13-kal) n. 1.0. Something that can be or viewed, especially something of a remarkable or impressive ture. b. A public performance or display, especially one of the property of the ture. b. A public performance or display, especially one of large or lavish scale. c. A regrettable public display, as all behavior: drank too much and made o spectacle of himself spectacles. c. A pair of oyeglacres. b. Something resemble spectacles in shape or function. [Middle English, from French, from Lutin spectaculum, from spectare, to watch, from Lutin spectaculum, from spectare, to watch, quentative of specere, to book at. See spek- in Appendix [4] quentative of specere, to book at. See spek- in Appendix [4] appendix of the control of the control of the mature of a spec-facture of spek-tak/ys-lating). Of the nature of a spec-facture of spek-tak/ys-lating).

spec-tac-u-lar (spek-tak-ys-lar) adj. Of the nature of at tacke; impressive or sensational. — spectacular n. Sand that is spectacular n. that is spectacular, as: a. A single dramatic production of sual length or lavishness. b. An elaborate display. tacturlariity (-larii-le) n. -spac-tactu-tarily adv.



spectacled Speciacled bear Tremarctos ornatus

Single of the state of the stat

の命となられ

ap F

ine distinctness of equivocal reference

rogram) that is not a special service or

private property to

property special delivery n (1886): expedited messenger delivery of mail matter

for an extra fer
special district n (1950): a political subdivision of a state established to
special district n (1950): a political subdivision of a state established to
provide a single public service (as water supply or sanitation) within a
provide a single public area.

special drawing rights n (1967): a means of exchange used by governments to settle their international indebtedness ments to settle their international indebtedness special effects n pi (1944): visual or sound effects introduced into a special effects n pi (1944): visual or sound effects introduced into a special effects n pi (1944): visual or sound effects introduced into a motion picture or a taped television production during laboratory

processing

Special Forces n pl (1962) t a branch of the army composed of men

specially trained in guernila warfare

special handling n (1928): the handling of parcel-post or fourth-class
mail as first-class but not as special-delivery matter for an extra postal

fee

special handling n (1928): the handling of parcel-post or fourth-class mail as first-cluss but not as special-delivery matter for an extra postal fee special interest n (1910): a person or group seeking to influence legislative or government policy to further often narrowly defined interests; exp t 10887

special-ism \spesh-a-liz-om\n (1856) 1: specialization in an occupation or branch of learning 2: a field of specialization: special-ism \special-ism\n (1856) 1: one who devotes himself to a special-ist \spech-a-liz-st\n (1856) 1: one who devotes himself to a special-ist \spech-a-liz-st\n (1856) 1: one who devotes himself to a special-ist \spech-a-liz-st\n n (1856) 1: one who devotes himself to a special-ist \spech-a-liz-st\n n (1856) 1: a my of four enlisted ranks in the army corresponding to the grades of carporal through sergeant first class — specialist or special-st-tc\n n pl -tles (15c) 1: a special mark or quality 2: a special object or class of objects 3 a: a special aptitude or skill b: a particular occupation or branch of learning special-ization \spech-a-liz-\n n pl -tles (15c) 1: a making or becoming specialization or specialization or for an organism adaptation of a body part to a particular function or of an organism adapted by specialization special-ization \spech-a-liz\n vb -lzed; -iz-ing vi (1613) 1: to make particular mention of : PARTICULARIZE 2: to apply or direct to a specific end or use (specialized his study) ~ vi 1: to concentrate one's efforts on a special activity or field 2: to undergo specialization: esp: to change adaptively (the stoth became highly specialization in the course of evolution)

special-ized adj (1853) 1: designed or fitted for one particular purpose or occupation (~ personnel) 2: characterized by or exhibiting bloological specialization: esp: highly differentiated esp. in a particular of becter educated or presumably more intelligent prospective jurors for a case involving complicated issues of fact or serious felonis — called also blue-ribbon hur)

special-ized theor

ing argument that presents one point or phase as if it covered the entire question at issue special theory of relativity (1924): RELATIVITY 3a speciality (spash-ol-te\ n, pl -ties [ME specialite, fr. MF especialite. fr. L. speciality (specialitation, specialitation) speciality 2 a: a special object or class of objects: as (1): a legal agreement embodied in a scaled instrument (2): a product of a special kind or of special excellence (fried chicken was father's ~) b: the state of being special excellence (fried chicken was father's ~) b: the state of being special distinctive, or peculiar 3: something in which one specializer specia-tion specializer (specia-tion specializer specia-tion specializer (specializer (

insult in specie); also: in coin

*specie n [back-formation fr. species (taken as a pl.)] substand (1711)

: species

*species *species*

any of various arbitrary al constants and esp. one relating a quantitative atribute to u. nass, volume, or area b: imposed the liked tate per unit (as of weight or count) (~ import duties) — conpare AD VALOREM aya see SPECIAL EXPLICIT — specifol-calls (b) it adv

k(a-)iè\ adv

**specific n (1661) 1 a : something poculiarly adapted to a purpose of use b : a drug or remedy having a specific mitigating effect on a diverse 2 a : a characteristic quality or trait b : DETAILS. PARTICULARS case 2 a : a characteristic quality or trait b : DETAILS. PARTICULARS case 2 a : a characteristic quality or trait b : DETAILS. PARTICULARS case 2 a : a fertile over the legal and financial coin independence—Time) c pl: SPECIFICATION 2a dence—Time) c pl: SPECIFICATION 2a (1615) 1: the act or process of specifying 2 a : a detailed precise presentation of something or of a specifying 2 a : a detailed precise presentation of something or of a specifying 2 a : a detailed precise presentation of something or of a specifying 2 a : a detailed precise presentation of something or of a specifying 2 a : a detailed precise presentation of something or of a specifying 2 a : a detailed precise presentation of summittee a single legal particulars (us of charges or of contract terms); also : a single item of such statement c : a written description of an invention for which a patent is sought

legal particulars (as of charges or of contract terms); also: a single item of such statement c: a written description of an invention for which a patent is sought specific epithet n (1947): the Latin or latinized noun or adjective that follows the genus name in a taxonomic binomial follows the genus name in a taxonomic binomial specific gravity n (1666): the ratio of the density of a substance to the density of some substance (as pure water or hydrogen) taken as a standard when both densities are obtained by weighing in air specific heat n (1832). It the ratio of the quantity of heat required to raise the temperature of an equal mass of water one degree 2: the heat in calonies required to raise the temperature of one gram of a substance one degree centigrade.

Specific impulse n (1947): the thrust produced per unit rate of consumption of the propellant that is usu, expressed in pounds of thrust sumption of the propellant used per second and that is a measure of the efficiency of a rocket engine specificier, as a: the condition of being peculiar to a particular being specific; as a: the condition of being peculiar to a particular individual or group of organisms (host ~ of a parasite) b: the condition of participating in or entalyzing only one or a few chemical reactions (the ~ of an enzyme) specific performance n (1873) 1: the performance of a legal contract strictly or substantially according to its terms 2: an equitable remedy english specific performance.

specific performance h (1873) 1: the performance of a legal contract strictly or substantially according to its terms 2: an equitable remedy enjoining specific performance

specify 'spes-o-fil v'-fled; 'fy-ing [ME specifien. fr. MP specifier, fr. LL specificare, fr. specificus] (140) 1: to name or state explicitly or in detail 2: to include as an item in a specification — specificable \-fil-specified \-filespecified \-filespec

*speck of (1580): to produce specks on or in tspeck-le \speck-ol\ n [ME; akin to OE specco] (150): a little speck (as of color)

ter: ditostly 2: all relating to, or made by a spectrum — spectrally spectral day spectral line n (1902): one of a series of linear images of the narrow, sill spectrograph or similar instrument corresponding to a component of the spectrum of the radiation emitted by a particular source of the spectrum of the radiation emitted by a particular source of the spectrum of the spectrum!: spectro-comb form [NL spectrum]: spectrum (spectroscope) spectro-file-organic-ter \spectro-file-organic-ter \spectro-file-organ

1730

specialization

EXHIBIT B

From-GENENTECH LE'

ion (spesh's-lt-za'shan) n. I. The act of spe-rocess of becoming specialized. Z. Biology. a. an argan or organism, to a specific function or A character, a feature, or an organism resulting

pesh/a-liz/) v. -lzod, -lz-lng, -lz-os, -intr.
pectal activity, occupation, or field of study, 2. op so as to become adapted to a specific function undergo specialization. 3. To concentrate on a

particular activity or product: The shop specializes in mountoin-climbing gear. — tr. 1. To make specific mention of; particular-ize. 2. To give a particular character or function to: specialized her field of rescarch. 3. Biology. To adapt to a particular function or environment: cause to underto specialization. 4. To specify or environment; cause to undergo specialization. 4. To specify the payer in endorsing (a check).

special jury a. Law. See blue-ribbon jury.

Special Olympics pl.m. A program of competitive sports
events fashioned after the Olympic games and intended for physical competitive sports. ically or mentally challenged athletes.

special pleading n. 1. Law. Assertion of new or special matter to offer the opposing party's allegations, as an alternative to direct denial. 2. A presentation of an argument that emphasizes

direct denial. 2. A presentation of an argument that emphasizes only a (avorable or single aspect of the question at issue.

special relativity n. The physical theory of space and time developed by Albert Einstein, based on the postulates that all the laws of physics are equally valid in all frames of reference moving at a uniform velocity and that the speed of light from a uniformly at our uniform velocity and that the speed of light from a uniformly at our uniformly source is always the same, regardless of how first or slow the source or its observer is moving. The theory has as consequences the relativistic mass increase of rapidly moving objects, the Loroniz-Fitzgorald contraction, time dilutation, and the principle of mass-energy equivalence. Also called special theory of relative to the contraction of the contrac ciple of mass-energy equivalence. Also called special theory of rel-

special session n. A session of a court or legislative body held

in addition to the regular sessions.

special theory of relativity n. See special relativity.

special-ty (spesh/el-te) n. pl. -flos. 1. A special pursuit, occupation, aptitude, or skill. See Synonyms at fortal. 2. A occupation, aptitude, or skill. See Synonyms at 16rto 1. 2. A branch of medicine or surgety, such as cardiology or neurosurgety, in which a physician specializes; the field or practice of a specialist. 3. A special feature or characteristic; a peculiarity. 5. An item or The state or quality of being special or distinctive. 5. An item or a product of a distinctive kind or of particular superiority; French postry it the cheft specially, 6. Low. A special contract or agreement, especially a deed kept under seal.

[pe-ci-d-tion (specially a fight particular superiority for the cheft specially and specially a fight particular special spe

ment, especially a deed kept under seal.

specified from (specishe a shan, -so-) n. The evolutionary locmation of now biological species, usually by the division of a singic species into two or more genetically distinct ones. [speci(25)] -ATION.] -spo'd-altion-d edj.

spe-cia (spe/she, -se) n. Coined money; coin. — Idiom. In spe-cia. 1. In coin. 2. In a similar monner; in kind: repaid the office. 1. In coin. 3. Law. In the same kind or shape; as specified. Prom (in) specie, (in) the actual form, from Latin (in) specie, (in) kind, ablative of species. See apecies.)

kind, ablative of species. See apecies. Abbr. sp. 1. Biology.

2. A fundamental category of taxonomic classification, ranking
below a genus or subgenus and consisting of related organisms
capable of interbroeding. See table at taxonomy. b. An organism belonging to such a category, represented in binomial nomenclasure by an uncapitalized Latin adjective or noun following a
capitalized genus name, as in Ananas comosus, the pincappic, and
Equus cabaltus, the horse. 2. Logic, A class of individuals or
abjects grouped by virtue of their common attributes and assigned
common name; a division subordinate to a genus. 3.a. A kind,
a common name; a division subordinate to a genus. 3.a. A kind,
a car a dancer "(Susan Sontag). b. The human race: humankind. 4.
Roman Catholic Church. a. The outward appearance or form of
the Eucharistic elements that is retained after their consecration,
b. Either of the consecrated elements of the Eucharist. S. Obsoletc. a. An outward form or appearance. b. Specie. [Middle
English, logical classification, from Latin species, a seeing, kind,
form. See spok- in Appendix.)

saguan, aggical classification, from Latin species, a scoring, kind, form. See spok- in Appendix.)

sporcios-ism (spershe-ziz/am, -se-) n. Human intolorance or discrimination on the basis of species, especially as manifested by cruely to or exploitation of animals. —sperdet-ist ady. & n.

spo-cles-spo-cif-ic (spershes-spi-sif/ik, -etz-) adj. Limited to or found only in one species; a species-specific antibody; a species-specific virus. —sporcles-specific/i-iy (-species-specific virus.

specif. abbr. 1. Specific. 2. Specifically.

spec-i-fi-d-bia (spec's-ff'a-bal) adj. Possible to specify:

specifiable complaints.

spo-cif-le (spi-cifrik) adj. Abbr. specif., sp. 1. Explicitly set torth; definite. See Synonyms at explicit. 2. Relating to, torth; definite. See Synonyms at explicit. 2. Relating to, other circular specific specific specific specific specific render tive, or unique specific qualities and attributes. 4.a. Intended tor, applying to, or acting on a particular with the subject specified for warts. 5. Concerned particularly with the subject specified of two used in combination: "age-specific potting patterns" (A. Di-Otton used in combination: "age-specific patterns" (A. Di-Otton used in combination: "age-specific

rather than according to value. b. Designating a commodity be rather than according to value. b. Designating a commodity being applicable to the transportation of a single commodity being applicable to the transportation of a single commodity being applicable to the transportation of a single commodity being among the particular alkang a use or purpose. b. A remedy intended for a particular alkang or disorder. 2. a. A distinguishing quality or attribute. b. spacifics. Distinct items or details: particulars. [Late Latin specific disc. Distinct items or details: particulars. [Late Latin specific Latin specific, kind, species; see SPECIES + Latin specific, kind, species; see SPECIES + Latin specific, kind, species; see SPECIES + Latin specific (specialisty) adv.—specificility (specialisty).

speci-fi-ca-tion (speci-fi-halfshan) n. Abbr. spec. I. The first of specifying. 2.a. specifications. A detailed, exact state and of specifying. ment of particulars, especially a statement prescribing material ment or particulars, especially a statement product to be built be dimensions, and quality of work for something to be built be stalled, or manufactured. b. A single tiem or article that has be specified. J. An exact written description of an invention by applicant for a patent.

specific epithet n. The unexpitalized Latin adjective or so that follows a capitalized genus name in binomial nomenciate, and serves to distinguish a species from others in the same genu as saccharum in Acer saccharum (sugar maple). Also called inge

specific gravity a. Abbr. sg. sp gr The ratio of the maker a solid or liquid to the mass of an equal volume of distilled was a solid or liquid to the mass of an equal volume of distinct was at 4°C (39°F) or of a gas to an equal volume of sir or hydrocunder presented conditions of temperature and pressure.

specific heat n. Abbr. sp ht 1. The ratio of the amount of be required to raise the temperature of a unit mazz of a substance a one unit of temperature to the amount of heat required to raise & temperature of a similar mass of a reference material, usually as ter, by the same amount. 2. The amount of heat, measured t calories, required to raise the temperature of one gram of a sa stance by one Celsius degree.

specific impulso n. A performance measure for rocket in pellants that is equal to units of thrust per unit weight of po-pellant consumed per unit time. Also called specific thrust. specific performance n. Law, The performance of a co-

tract as specified in its terms.

specific resistance n. Electricity. Electrical resistanty.

specific thrust n. See specific impulsa.

specific thrust n. See specific imputes.

spec-1-fy (spec-1-fr) tr.v. -fied, fy-lng, fles, 1. To an explicitly or in detail: specified the amount needed. 2. To incide in a specification. 3. To state 25's condition: specified that do included in the will. [Middle English specifien, from the French specifier, from Late Latin specificars, from specificac, specific See specifies. citic. See EFECIFIC.] -specificier n.

Spec-1-men (spec-3-men) a. Abbr. sp. 1. An individual, a spec-1-men (spec-3-men) a. Abbr. sp. 1. An individual, a stem, or a part representative of a class, genus, or whole. See Sp. 1. An individual only a see special and to look at See spek- in Appendix.)

to sook at ook space in Appendix.

Spo-clous (apolishas) adj. 1. Having the ring of truth or pli
sibility but actually fallacious: a specious argument. 2. Des
tively attractive. [Middle English, attractive, from Latia spa
sus, from species, appearance, from specere, to look at. See sp.
in Appendix.] — spo-clous-ty adv. — spo-clous-ty (-special-spec in Appendix.] -sperdous ty add. 0s/1-18), sperdous noss (-shan-nis) n.

USAGE NOTE: A specious argument is not simply a false are one that has the ring of truth. Those aware of the specialized of the word may therefore sense a certain contradiction in her an argument described as authoraly specious or specious of face of things; if the foliaciousness is apparent, the argument probably not plausible-counding to begin with.

speck (spek) n. 1. A small spot, mark, or discoloration-tiny amount; a bit: not a speck of truth in her story. — speck specked, speck-ling, specks. To mark with specks. [N English specker, from Old English specks.]

Spack-le (spekral) m. A speck or small spot, especially a n dot of color on skin, plumage, or foliage. [Middle English 4]

speck-led (spek/ald) adj. 1. Dotted or covered with speedally flecked with small spots of contrasting color. 3 mixed character, motley.
speckled trout s. See brook from

SPOCS also specks (speks) pl.n. Informal. Byoglusses;



Boortacled bour Tremarctos ornatus